

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON SMALL AND MEDIUM-SIZED ENTERPRISES: TRENDS, CHALLENGES, AND PROSPECTS BY 2025

● TRAN KHANH LAM¹ - LE THANH XUAN²

¹Vietnam Association Certified Public Accountants

²Ton Duc Thang University

ABSTRACT:

In recent years, artificial intelligence (AI) has expanded from experimental settings into everyday business operations. Small and medium-sized businesses (SMEs), which constitute the majority of enterprises worldwide, have rapidly recognized AI's potential to enhance productivity, broaden market access, and improve competitiveness. This study synthesizes and analyzes key global trends in AI adoption among SMEs toward 2025, drawing on authoritative sources such as the World Trade Organization, World Bank, OECD, U.S. Chamber of Commerce, ITIF, G7 reports, and academic literature. Findings show that while nearly all small firms now use at least one digital platform, AI has emerged as the fifth most widely adopted technology, with generative AI adoption doubling since 2023. However, significant barriers remain, including high implementation costs, skill shortages, and technological complexity. Evidence from the G7 and OECD indicates that only about one-third of SMEs in member countries use any form of AI, and fewer than 20% have implemented generative AI. The study also highlights how leading SMEs leverage AI to boost revenue, reduce operational costs, and upskill their workforce. Based on these insights, the study proposes policy directions and practical recommendations to support Vietnamese SMEs in adopting AI effectively and sustainably.

Keywords: artificial intelligence, small and medium-sized enterprises, digital transformation, innovation, supportive policies.

1. Introduction

In the context of a global economy that is rapidly shifting toward digital transformation, artificial intelligence (AI) is considered a technological

foundation of the Fourth Industrial Revolution. Not only do the big operations care, AI is permeating every industry and creating profound changes into operating methods of businesses. For the small and

medium businesses, playing a crucial role in creating jobs and promoting creative innovation, AI opens a chance of enhancing productivity, accessing new market, and freeing human from repetitive tasks. However, the reality only a few SMEs are leading in leveraging this good potential, while many enterprises are still hesitant or lack the capacity to implement.

According to the Digital Progress and Trends Report by the World Bank (2024), the proportion of micro-enterprises (0-4 employees) investing in digital solutions increased from 10% in April 2020 to 20% in December 2022; while among large enterprises (over 100 employees), this proportion rose from 20% to 60%. The report also shows that the East Asia region has experienced a fourfold increase in digital investment (from 13% to 54%) during the 2020-2022 period, but in many other regions, this proportion remains below 30%. This reflects the disparity in the extent of digital transformation among businesses of different sizes and among countries. While large enterprises are quickly investing in AI and data technology to optimize the supply chains, many SMEs are struggling with manual accounting systems or are limited by the outdated infrastructure.

Another source, the Empowering Small Business 2024 report by the U.S. Chamber of Commerce, recorded that 99% of small businesses in the United States use at least one technology platform. The percentage of business using AI tools (including generative AI as ChatGPT) has reached 40%, nearly doubling compared to 2023; 91 % businesses using AI believed that this technology will help them grow in the future. However, 86 % small business owners are concerned that complex legal regulation may hinder their growth, and the majority still consider a lack of AI knowledge the biggest challenge.

From a policy perspective, OECD and G7 emphasize that the AI adoption among small and medium-sized businesses remains at a low level. OECD data from 2023 shows that only 33% of SMEs in member countries use any AI tools (ICSB, 2025). The 2024 G7 report notes that about 18% businesses in MSMEs group deployed generative AI services, and the majority still rely on basic applications (Raffaele Spallone, Matteo Bandiera,

2024). The figures above highlight the urgency of further investigating motivations, barriers, and directions of AI with SMEs to support the investment decision and policy planning.

In Vietnam, the start-up community and SMEs are developing rapidly, especially in the e-commerce, logistics, education, and financial services sectors. HCMC is considered a hub of innovation with thousands of startups. Many young businesses have leveraged AI to automate advertising, analyze customer data, and manage inventory. However, informal surveys show that most businesses do not yet have a clear AI strategy and remain confused by technical terminology. This article focuses on synthesizing and analyzing the most up-to-date studies to: (1) identify the factors that promote AI adoption; (2) understand the reasons why many businesses remain hesitant; (3) highlight simple yet effective steps taken by leading business groups; (4) provide policy recommendations and future approaches in the Vietnamese context.

2. Research methodology

Because the topic the impact of AI on SMEs is relatively new and rapidly evolving, the authors select a systematic review approach combined with qualitative analysis. The process includes four steps: (1) literature search; (2) screening and quality assessment; (3) data extraction; (4) thematic analysis.

The data of research include academic articles published in reputable journals, monographs, reports of international organizations (World Bank, OECD, G7, and IFAC), business reports (U.S. Chamber of Commerce and ITIF), and posts on academic websites and specialized forums. The keywords used when searching on Google Scholar and digital libraries include: AI adoption SMEs, generative AI small business 2025, “technology-organisation-environment framework”, “barriers to AI adoption”, SMB digital transformation, and OECD SME digitalisation. The research focuses on the period 2023 - 2025 in order to collect the most up-to-date data. Non-English materials were translated into Vietnamese when necessary.

Extracted documents are judged based on criteria: (i) authenticity (published by reputable

organizations or peer-reviewed), (ii) relevance (directly related to SMEs and AI), and (iii) timeliness (from 2023 onwards). Reports lacking specific data or signs of commercial bias were eliminated from the analysis. Data extraction included statistics (AI adoption rates, revenue growth, benefits, and barriers), policy descriptions and typical case studies. Citations were noted properly to help readers trace the original sources.

The thematic analysis approach was applied to synthesize the qualitative data. The authors carefully reviewed each document, coded the segments related to the motivations, barriers, and impacts of AI on SMEs. The codes were then grouped into themes, such as economic motivations, technological factors, organizational capabilities, environmental factors, human skills, and policy. Quantitative data (AI adoption rates, revenue growth rates) were synthesized and presented in tables and charts. Finally, the findings were compared with the Vietnamese SMB context to propose recommendations.

3. Literature review and theoretical framework

3.1. Overview of previous studies

3.1.1. General trends in AI adoption among SMEs

The 2024 report by the U.S. Chamber of Commerce shows that nearly all small businesses in the U.S. (99%) adopted at least one technology platform. AI has become the fifth most commonly used technology, following social media, digital payments, accounting software, and marketing platforms. The proportion of businesses stating they are using generative AI - including systems such as ChatGPT and Bard - reached 40%, nearly double the figure in 2023. 91% of businesses currently using AI, believe that this technology will support future business growth. Moreover, 81% plan to increase investments in technology; 77% plan to adopt emerging technologies such as AI and the metaverse; and 79% state that technology helped them avoid raising prices in the inflation context. The report notes that businesses using many platforms have sales growth rates, profits, and staff size that are significantly higher compared to those using fewer platforms (U.S. Chamber of Commerce, 2025).

Findings from the 2024 OECD survey, based on the data from seven countries (France, Germany, Italy, Japan, South Korea, Spain, and the United States), show a less optimistic picture. Only about 33% of the surveyed SMEs reported using any AI tool (ICSB, 2025). Meanwhile, nearly 20% of businesses experimented with generative AI services in the first year after the technology became widespread, and 57% assessed that the benefits of generative AI outweigh the risks. SMEs mostly train digital skills internally (46%) rather than hiring external consultants (42%), and 32% of self-employed individuals rely on online platforms to structure their digital transformation efforts. The biggest barriers that businesses stated include lack of time for training (43%), hardware and maintenance costs (37%), and shortage of talented people (27%); 44% of businesses apply no more than two cybersecurity solutions (OECD, 2024).

In Europe, the International Council for Small Business (ICSB) warns that only 33% of European SMEs currently use tools related to AI, with the rates of micro-enterprises (under 10 employees) even lower (ICSB, 2025). The report by James Vincent shows that the three AI applications with the most transformative impact on SMEs are: (i) AI-powered automation to streamline office tasks, invoicing, and internal communications; (ii) predictive analytics to enhance inventory management, predict the demand, and optimize cash flow; and (iii) smart customer interaction systems for personalized services and improve marketing ROI. Vincent suggested that AI technologies have become practical, affordable, and accessible for SMEs; however, an adoption gap is still significant, and businesses lack practical guidance. This is also the general observation of the World Bank when only indicating the disparity between small and large businesses investing in digital technologies. (World Bank, 2024).

In the United States, the Information Technology and Innovation Foundation (ITIF) used data from the U.S. Census Bureau and the Business Trends and Outlook Survey (BTOS) to evaluate the situation of AI adoption. The 2025 results indicate that businesses with over 250 employees have the highest average AI adoption rate at 11%, while the

smallest group (1- 4 employees) ranks second at 7%. Although the extent of adoption remains modest, the microenterprises have high expectations for AI: 10% of businesses with 1- 4 employees expect to use AI for producing goods or services within the next six months; these figures in large enterprises are 16%. ITIF also cites a study by McKinsey estimating that AI adoption could contribute an additional 3.4 percentage points to businesses' annual productivity growth. Interestingly, the data from the U.S. National Center for Science and Engineering Statistics show that 13.7% of businesses using AI have increased their workforce, while only 6.9% have reduced staff; over 55% report that AI has had little or no impact on skill levels of the workforce (Meghan Ostertag, 2025). This suggests that concerns about AI causing widespread unemployment have not yet been verified in reality

3.1.2. Economic benefits and financial impacts

Empirical studies and business reports demonstrate the clear economic benefits when SMEs adopt AI. The U.S. Chamber of Commerce report indicates that businesses using multiple technology platforms achieve revenue growth of 85%, profit growth of 84%, and workforce growth of 82%, far surpassing those adopting fewer technologies (U.S. Chamber of Commerce, 2025). A report by Hostinger shows that 89% of small businesses use AI for daily tasks, and 78% of worldwide companies adopt AI in at least one function (Jordana Alexandra, 2025). Many organizations have reported that AI helps reduce operating costs by up to 30% and saves over 20 working hours per month (Oluwatosin Agbaakin, 2025).

Reports from the OECD and G7 provide a more global picture. The OECD states that the main benefits businesses perceive from digital transformation are increased profits (domestic sales rising by 47%, access to new customers by 41%) and improved productivity through automation (40%). At the same time, 72% of businesses leverage digital data to support strategic decisions (OECD, 2024). The G7 also highlights that generative AI is the most common type among microenterprises adopting AI, accounting for 18% (Raffaele Spallone, Matteo Bandiera, 2024).

3.1.3. Pioneering steps and successful lessons

Although many SMEs recognize the benefits of AI, adoption remains uneven. The report of OECD shows that the biggest barrier is a lack of time to train the employees (43%), next one is hardware and maintenance cost (37%), and lack of skills (27%) (OECD, 2024). Vincent (ICSB) adds that SMEs are "overwhelmed by the sea of solutions", lack practical guidance, causing them to feel overloaded rather than opposed to technology (ICSB, 2025). The G7 identifies three main barriers from OECD survey results: (i) the high cost of AI technology; (ii) the lack of necessary skills; (iii) skepticism about technology. Among these, manufacturers often highlight cost and skepticism, while financial businesses are concerned about legal regulations. The G7 also notes differences by nationalities: Canadian businesses rate the cost barrier about 10 percentage points higher than UK businesses, while German businesses emphasize the lack of skills more than French businesses (Raffaele Spallone, Matteo Bandiera, 2024).

In addition, a study published in the Premier Journal of Science (Mathagu, 2024) shows that the key factors driving AI adoption decisions include: legal regulations, relative benefits, leadership support, technological infrastructure, and available resources. Meanwhile, the complexity of technology does not significantly affect adoption decisions. The study also reiterates that the rate of AI adoption among SMEs worldwide remains low due to limited scale and resources. Other common barriers are financial costs, a lack of technical expertise, and concerns about return on investment (Samuel Wandeto Mathagu, 2024).

3.1.4. Pioneering actions and success lessons

Some SMEs are leading by adopting AI early. A report by the U.S. Chamber describes that group using platform - using four to five platforms account for half of businesses and bring outstanding business results. These companies often leaders understand about the technology, own innovative culture, and consider data as a strategic asset. They deploy AI in multiple functions: from financial management, marketing, customer service, demand forecasting, and inventory management

Some SMEs have taken the lead by adopting AI early. A report by the U.S. Chamber describes the

group that uses platforms - those using four to five platforms account for half of businesses and achieve outstanding business results. These companies often have leaders who understand the technology, foster an innovative culture, and consider data a strategic asset. They deploy AI in multiple functions: from financial management, marketing, customer service, demand forecasting, and inventory management (U.S. Chamber of Commerce, 2025).

Vincent (ICSB) states practical cases, such as a charity organization in the UK that was initially cautious about AI due to ethical concerns, but after using an automated donation tool and organizing training on responsible AI, the organization rebuilt trust and continued deploying the technology, as reported by its sponsors. A robotics startup in the UK was also hesitant about AI because of concerns over source code and intellectual property; the advisory team established a safe testing environment and internal standards, helping the company succeed in deploying predictive maintenance tools (ICSB, 2025). These cases highlight the necessity of in-depth training and a cautious approach to building trust.

3.2. Research theories

This part introduces frameworks often used to analyze AI adoption and new technologies in small and medium-sized businesses.

3.2.1 The Technology-Organization-Environment (TOE) framework (TOE)

TOE is a prominent analytical model proposed by Tornatzky and Fleischer (1990) to explain decisions to adopt new technologies. The model states that adoption is simultaneously influenced by three factors: (i) technological factors - compatibility, relative advantage, complexity, and observability; (ii) organizational factors - size, structure, resources, culture, and leadership support; (iii) environmental factors - competition, industry, pressures from partners, and legal regulations. Mathagu (2024) applied the TOE framework and used a structural model to investigate 413 SMEs in the UK; the results indicate that the most important factors driving AI adoption are legal regulations, relative advantage, leadership support, technological infrastructure, and resources, whereas the complexity of

technology does not have a significant impact. The study recommends that SMB managers invest in infrastructure, search for regulatory support, carefully evaluate AI benefits, and mobilize the resources for investment (Samuel Wandeto Mathagu, 2024).

3.2.2. Diffusion of Innovations Theory (DOI)

Everett Rogers (1962) proposed the Diffusion of Innovations (DOI) theory, which explains how a technology or idea is spread within a community. DOI emphasizes four factors: (1) the characteristics of the innovation (relative advantage, trialability, observability, complexity); (2) communication channels; (3) time; and (4) social context. In the context of SMEs, AI should be introduced through small-scale pilots to help businesses clearly see the benefits and reduce perception of risks. Sharing success stories and using entrepreneurial networks can accelerate adoption. DOI adds insights into the role of culture and community communication-the factors are sometimes missed in quantitative analyses.

3.2.3. Resource-Based View (RBV) Theory

RBV states that the competitive advantage of businesses comes from valuable internal resources, hard to copy. In the AI situation, important resources are not only financial capital but also high-quality data, analytical skills, a learning-oriented culture, and technological infrastructure. Small businesses that invest in employee training, foster a data-driven culture, and maintain technology partnership relationships can transform AI into a long-term advantage. RBV helps explain why two SMEs of the same size may have different success levels when deploying AI.

3.2.4. Institutional and Policy Framework

Many researchers emphasize that the institutional environment has a significant impact on technology adoption decisions. Supportive policies, a clear legal framework, and funding initiatives can encourage businesses to invest in AI. A report by the U.S. Chamber shows that 86% of small business owners believe proposed technology regulations could challenge the growth. The G7 also highlights the need for shared infrastructure policies, financial support, and governance frameworks to promote AI adoption in small businesses. In Vietnam, the Law on

Information Technology and the National Strategy on Industry 4.0 create an initial legal foundation, but implementation remains fragmented. Issuing specific guidelines on protecting data and financial support for SMEs adopting AI should be prioritized.

4. Research findings and discussion

4.1. Drivers of AI adoption in SMEs

4.1.1. Increasing productivity and revenue

Data from multiple sources indicates that AI brings clear economic benefits for SMEs. McKinsey estimates that AI and automation could add 3.4 percentage points to annual productivity growth of businesses (Meghan Ostertag, 2025). A report by the U.S. Chamber demonstrates that the group of businesses using multiple technology platforms experience revenue, profit, and staffing growth by over 80% (U.S. Chamber of Commerce, 2025). Arxiv (Salesforce) reports that 91% of SMEs using AI recorded increased revenue and reduced operating costs by up to 30% (Oluwatosin Agbaakin, 2025). The OECD also indicates that 47% of businesses perceive that domestic sales increased by digital tools, and 40% improve productivity through automation (OECD, 2024). Thus, AI is not only a trend but also a tool that creates measurable value.

4.1.2. Customer reach and market expansion

Small businesses often face difficulties in reaching new customers due to limited marketing budgets. AI provides automated marketing tools, customer data analytics, and demand forecasting, enabling SMEs to target customers with precision. The OECD reports that 41% of businesses use digital tools to expand the scope of customer reach (OECD, 2024). Smart customer interaction systems such as chatbots and email automation which can personalize service and enhance response rates (ICSB, 2025). In reality, many Vietnamese startups use AI to optimize advertising on platforms like Facebook/Google, create personalized content for different customer segments, and analyze feedback to improve their products. As a result, they can compete effectively with large brands without investing heavily in marketing costs.

4.1.3. Financial management and optimization of cash flows

SMEs often lack professional finance

departments, making cash flow management and profit prediction a challenge. AI can automate accounting, predict cash flows, detect fraud, and propose cost optimization. The U.S. Chamber reports that financial software, AI, and cash flow management tools rank fifth among the platforms used by SMB (U.S. Chamber of Commerce, 2025). In Vietnam, many businesses use ChatGPT combined with Excel to make financial projections, analyze profits, and optimize selling prices. AI also supports loan decision-making by credit analysis and cash flow forecasting models, helping SMEs access official finance more easily. This is a key driver for promoting the adoption of AI.

4.1.4. Create new products and services

Generative AI not only supports operations but also opens up opportunities to create new products and services—from designing content and prototyping to developing customer service chatbots. The G7 notes that 18% of MSMEs have deployed generative AI in production and operations (Raffaele Spallone, Matteo Bandiera, 2024). The U.S. Chamber reports that 40% of SMEs are using generative AI, and this rate is accelerating rapidly in 2024-2025 (U.S. Chamber of Commerce, 2025). Many business owners share that AI helps them create advertising copy, video scripts, and even draft contracts, saving time and the cost of hiring specialists. Thanks to its flexibility and low cost, generative AI is considered a breakthrough opportunity for SMEs.

4.2. Reasons why businesses remain hesitant

4.2.1. Costs and resources

Cost is considered the biggest barrier. The G7 emphasizes that the high cost of AI technologies makes it difficult for small businesses to access them. The OECD also notes that many SMEs do not have sufficient resources to invest in the hardware, software, and personnel for AI (OECD, 2024). In Vietnam, the costs for hiring server, buying licensed software, and employee training can account for a large proportion of revenue. While large corporations have the ability to change fixed costs into operating expenses (AI-as-a-service), SMEs find it hard to compete. Approaches such as using cloud services, outsourcing technology, or partnering with universities could help lessen this burden.

4.2.2. Lack of skills and expertise

The second barrier is a lack of skills. An OECD survey shows that 27% of SMEs consider the lack of talent a major barrier. The G7 report indicates that recruiting AI specialists is difficult due to a scarce labor market, high salaries, and complex visa processes. Resources - including skills - are a key factor influencing AI adoption decisions. In Vietnam, many SMEs rarely have a data team or even an IT department. Therefore, training existing employees becomes necessary. However, many training programs are either too theoretical or too expensive. Some solutions are organizing practical bootcamps, partnering with universities or technology companies to provide free courses, and offering direct mentoring.

4.2.3. The complexity and ambiguity of technology

An important reason for SMEs' hesitation is the perception of complexity. Many business owners do not have a technical background, find AI difficult to understand, and are concerned about ethical risks and data privacy rights. SMEs as being overwhelmed in a sea of information and products. The complexity of the technology is not a determining factor in AI adoption when other factors, such as infrastructure and leadership support, are guaranteed. However, with regard to operators without technical knowledge, the complexity remains a psychological barrier. Therefore, providing simple guidelines, practical examples, and language that is easy to understand is crucial.

4.2.4. Legal and ethical concerns

Regulations on data and artificial intelligence are still in the development process. The U.S. Chamber notes that 86% of business owners are concerned that new regulations may hinder growth. The G7 identifies "safety and trust" as top priorities in policy development. Overlapping and inconsistent regulations among states (in the U.S.) or countries make businesses hesitant to invest due to concerns about legal violations. Many SMEs are also concerned about ethical issues such as AI bias, privacy breaches, and even legal liability when AI makes incorrect decisions. Therefore, it is essential to have clear guidelines and a friendly legal framework with small

businesses, as well as to build an ecosystem to support legal consultation.

4.3. Effective implementation steps for SMEs

Based on the analysis of typical case studies and recommendations from reports, we can synthesize several steps to help SMEs start their AI journey.

- Identify specific problems and start with small experiments: Many successful SMEs often choose a clear issue, such as automating email responses, inventory forecasting, or analyzing marketing to pilot project. Starting with a small project makes small businesses easier to evaluate benefits, adjust, and learn. The DOI theory emphasizes the importance of trialability and observability.

- Leverage existing tools and cloud services: To reduce costs, SMEs should use AI-as-a-Service platforms (AWS, Google Cloud, Azure) or low-code tools. This approach allows businesses to deploy quickly without having to invest in complex infrastructure.

- Invest in data and training: Quality data is the fuel for AI. SMB should establish processes for collecting, storing, and cleaning data. At the same time, they should train employees in basic digital skills, combined with specialized courses. Vincent describes how the implementation of practical training programs has helped enhance employee competence.

- Collaborate and learn from the community: Small businesses can partner with universities, research institutes, or participate in support programs from the government and international organizations. The OECD reports that many SMEs self-learning internally or online; however, collaboration will create systematic knowledge and financial support.

- Pay attention to governance and ethics: When deploying AI, SMEs need to establish data governance processes, ensure security, and conduct risk assessments. G7 recommends developing safe and trustworthy policies, exercising caution when using generative AI to avoid copyright infringement or creating inappropriate content.

4.4. Discuss in the context of Vietnam

In Vietnam, the particular business environment have different features from reports from the United States and Europe. Many Vietnamese SMEs are family enterprises with small scale,

limited capital, and a shortage of specialized personnel. However, they have advantages of dynamic, adaptability, and ready to experiment with new technologies. The wave of tech startups in Ho Chi Minh City has created a strong community, but most AI applications just stop at the level of automated marketing and customer service chatbots. Not many enterprises have reached enhanced data analytics, demand forecasting, or supply chain optimization.

The biggest challenge in Vietnam is probably the lack of skills and information. Many business owners still think AI is something distant and expensive. In order to address this, the government can support through: (i) creative innovation support funds for SMEs, providing finance and consultation; (ii) training programs in collaboration with enterprises and universities, focusing on practical skills; (iii) establishing a national data center and shared AI platforms that SMEs can use at low cost. Moreover, there is a need for a clear legal framework on personal data protection and incentives for safe data sharing. Lessons from the G7 show that policies such as pilot sandboxes, financial subsidies, and flexible regulations help small businesses confidently adopt AI.

5. Conclusion

AI is becoming a game-changing factor for small and medium businesses (SMEs), yet the adoption levels and effectiveness differ

significantly among countries and businesses. The synthesized studies indicate that in the United States and some developed economies, almost all SMEs use at least one technological platform, and over 40% have adopted generative AI. Meanwhile, in OECD countries and the G7, only about 33% of SMEs use AI, and generative AI is just deployed by about 18%. The benefits of AI are not only increasing productivity and revenue; it also helps SMEs reach new customers, manage finances more effectively, and create new products. However, high costs, lack of skills and training time, legal concerns, and technological complexity remain major barriers.

The literature has analyzed theoretical frameworks such as TOE, DOI, RBV, and the institutional environment to explain AI adoption decisions and propose practical steps. Successful SMEs often start on a small scale, focus on solving specific problems, leverage cloud services, invest in data and training, collaborate with communities, and establish effective governance processes. To promote the AI wave in Vietnam, coordination among the government, universities, large enterprises, and the startup community is needed. Policies of financial support, practical training, shared infrastructure, and a friendly legal framework with SMB will be the key to helping small businesses to leverage AI and drive sustainable growth ■

REFERENCES:

- ICSB (2025). Boosting SME Competitiveness Through Digital and AI Adoption.
- Jordana Alexandra (2025). How many companies use AI in 2025? Key statistics and industry trends. Hostinger.
- Meghan Ostertag (2025). AI Can Improve US Small Business Productivity. [Online] Available at <https://itif.org/publications/2025/04/08/ai-can-improve-us-small-business-productivity/>
- OECD (2024). SME digitalisation in 2024 Managing shocks and transitions - An OECD D4SME Survey. [Online] Available at <https://www.oecd.org/content/dam/oecd/en/networks/oecd-digital-for-smes-global-initiative/FINAL-D4SME-2024-Survey-Policy-Highlights.pdf>
- Oluwatosin Agbaakin (2025). Leveraging Artificial Intelligence as a Strategic Growth Catalyst for Small and Medium-sized Enterprises. [Online] Available at <https://arxiv.org/html/2509.14532v1>
- Raffaele Spallone and Matteo Bandiera (2024). G7 Report on driving factors and challenges of AI adoption and development among companies, especially micro and small enterprises. [Online] Available at https://www.g7italy.it/wp-content/uploads/FINAL_REPORT_AI_MSMEs_Ministerial_10_Oct_2024.pdf

Samuel Wandeto Mathagu (2024). Artificial Intelligence in Small and Medium Enterprises - An Empirical Analysis of Critical Factors. Premier Journal of Science Review, 1, 100009.

U.S. Chamber of Commerce (2025). Empowering Small Business: The Impact of Technology on U.S. Small Business, 4th Edition.

World Bank (2024). Digital Progress and Trends Report. [Online] Available at <https://openknowledge.worldbank.org/entities/publication/7617f89d-2276-413d-b0a7-c31e7527d6af>

Received date: August 15, 2025

Reviewed date: August 27, 2025

Accepted date: September 10, 2025

TÁC ĐỘNG CỦA TRÍ TUỆ NHÂN TẠO ĐỐI VỚI DOANH NGHIỆP NHỎ VÀ VỪA: XU HƯỚNG, THÁCH THỨC VÀ TRIỂN VỌNG ĐẾN NĂM 2025

● TRẦN KHÁNH LÂM¹

● LÊ THANH XUÂN²

¹Hội Kiểm toán viên Hành nghề Việt Nam

²Trường Đại học Tôn Đức Thắng

TÓM TẮT:

Trong những năm gần đây, trí tuệ nhân tạo (AI) đã vượt ra khỏi phạm vi phòng thí nghiệm để đi vào các hoạt động kinh doanh hằng ngày. Các doanh nghiệp nhỏ và vừa (SMEs), vốn chiếm tỷ lệ lớn trong cơ cấu doanh nghiệp toàn cầu, đã nhanh chóng nhận thấy tiềm năng của AI trong việc nâng cao năng suất, mở rộng thị trường và tăng cường năng lực cạnh tranh. Nghiên cứu này tổng hợp và phân tích các xu hướng chủ đạo về ứng dụng AI trong khối SMEs đến năm 2025, dựa trên các nguồn uy tín như Tổ chức Thương mại Thế giới (WTO), Ngân hàng Thế giới, OECD, Phòng Thương mại Hoa Kỳ, ITIF, các báo cáo của G7 và các công trình nghiên cứu học thuật. Kết quả cho thấy mặc dù gần như toàn bộ doanh nghiệp nhỏ đã sử dụng ít nhất một nền tảng số, AI đang trở thành công nghệ được ứng dụng phổ biến thứ năm, trong đó tỷ lệ áp dụng AI tạo sinh đã tăng gấp đôi so với năm 2023. Tuy vậy, các rào cản lớn vẫn tồn tại, bao gồm chi phí triển khai cao, thiếu hụt kỹ năng và sự phức tạp của công nghệ. Bằng chứng từ các quốc gia thuộc khối G7 và OECD cũng cho thấy chỉ khoảng một phần ba SME tại các quốc gia thành viên đang sử dụng bất kỳ công cụ AI nào, và chưa đến 20% đã áp dụng AI tạo sinh. Nghiên cứu đồng thời làm rõ cách các SME tiên phong đang khai thác AI để tăng trưởng doanh thu, giảm chi phí và nâng cao năng lực lao động. Trên cơ sở đó, bài báo đề xuất các định hướng chính sách và khuyến nghị thực tiễn nhằm hỗ trợ các SME tại Việt Nam tham gia làn sóng AI một cách hiệu quả và bền vững.

Từ khóa: trí tuệ nhân tạo, doanh nghiệp vừa và nhỏ, chuyển đổi số, đổi mới, chính sách hỗ trợ.